



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,971	07/13/2006	Rudiger Kolblin	016906-0530	6190
22428 7590 11/09/2010 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007				
EXAMINER				
DUKE, EMMANUEL E				
ART UNIT		PAPER NUMBER		
3784				
MAIL DATE		DELIVERY MODE		
11/09/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/585,971

Applicant(s)

KOLBLIN ET AL.

Examiner

EMMANUEL DUKE

Art Unit

3784

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09/14/2010.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-13 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 07/13/2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/22)
Paper No(s)/Mail Date 04/08/2010
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Examiner's Comments

1. For applicant's information, signed and initialed copy of the PTO/SB/08 form is herewith attached.

Specification

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
 - (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
 - (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
 - (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
 - (e).....
 - (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
 - (g) BRIEF SUMMARY OF THE INVENTION.
 - (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
 - (i) DETAILED DESCRIPTION OF THE INVENTION.
 - (j) CLAIM OR CLAIMS (commencing on a separate sheet).
 - (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
 - (l)
3. The specification of disclose is objected to because the section headings are missing. Correction is required.

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because the instant abstract does exhibit one or more of the prohibited legal phraseology of "said". Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, 10 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Mendler et al. (U.S. Patent No. 5,927,394), hereinafter referred to as Mendler et al. '394.

Regarding Claim 1, Mendler et al. '394 disclose a heat exchanger having a plate-type design (Fig. 1 and 2: Col 2, lines 26-37, wherein an oil cooler is a heat exchanger having a plate-type design), comprising: at least two adjacent heat exchanger plates (2, Fig. 5: Col 2, lines 26-37) defining an inter-space (3, 4, Fig. 5: Col 2, lines 26-37) through which a heat exchanger medium (Col 2, lines 26-37, wherein a media is a heat exchanger medium): or a second medium:

to be cooled or to be heated flows: wherein the at least two adjacent heat exchanger plates are arranged in a stack (*Col 2, lines 26-27*), and a base plate (*17, Fig. 2: Col 3, lines 16-20*), wherein the base plate is provided at one end of the stack (*as shown in Fig. 2*), wherein the base plate is in at least substantially flat (*as shown in Fig. 2*) contact with an adjacent outermost heat exchanger plate (*2', Fig. 2: Col 3, lines 22-23*) of the heat exchanger, wherein the base plate comprises a depression (*see annotated Fig. 2: wherein 17d is a depression*) with a contour having a shape (*Fig. 2: Col 3, lines 16-20, wherein a surrounding edge is a contour having a shape*) that is the same shape as an entire outer edge (*Fig. 2: Col 2, lines 55-57, wherein a trough-shaped outer edge of 2' is an entire outer edge*) of a bottom surface (*Fig. 2: wherein an under surface of 2' is a bottom surface*) of one of the heat exchanger plates.

Regarding Claim 2, Mendler et al. '394 disclose the heat exchanger as claimed in claim 1, wherein flanks (*Fig. 5: Col 3, lines 1-3, wherein 16 is a flank*) of the outermost heat exchanger plate bear, at least in a lower region of the flanks, against flanks (*14, Fig. 5: Col 3, lines 11-15*) of the contour of the base plate, wherein the contour formed by the depression is recessed in the based plate.

Regarding Claim 3, Mendler et al. '394 disclose the heat exchanger as claimed in claim 1: wherein one edge of the outermost heat exchanger plate protrudes (*2a, Fig. 5: Col 2, lines 26-30*) over the base plate.

Regarding Claim 4, Mendler et al. '394 disclose the heat exchanger as claimed in claim 1, wherein the depression in the base plate has a thickness (*see annotated Fig. 2: wherein 17t is a proportional thickness of the base plate*) greater than a material thickness (*see annotated Fig. 5: Col 3, lines 8-10, wherein 2t is a material thickness*) of one of the at least two heat exchanger plates.

Regarding Claim 5, Mendler et al. '394 disclose the heat exchanger as claimed in claim 1, wherein the depression in the base plate has a depth (*Fig. 2: wherein depth the base plate is a depth*) at least as great as a material thickness (*see annotated Fig. 2 and 5: Col 3, lines 8-10*,

wherein $2t$ is a material thickness) of one the heat exchanger plates plus half of a clear height (*see annotated Fig. 5: wherein $4h$ is half of a clear height*) between the outermost heat exchanger plate, which bears against the base plate, and a second outermost heat exchanger plate (2, Fig. 5: Col 2, lines 26-37).

Regarding Claim 6, Mendler et al. '394 disclose the heat exchanger as claimed in claim 1, wherein the depression in the base plate is at least as deep as a material thickness (*see annotated Fig. 2 and 5: Col 3, lines 8-10, wherein $2t$ is a material thickness*) of one of the at least two heat exchanger plates of the heat exchanger plus a clear height (*see annotated Fig. 5: wherein $4h$ is half of a clear height*) between the outermost heat exchanger plate, which bears against the base plate, and a second outermost heat exchanger plate (2, Fig. 5: Col 2, lines 26-37).

Regarding Claim 7, Mendler et al. '394 disclose the heat exchanger as claimed in claim 1, wherein the contour in the base plate is produced by embossing, casting or machining, the applicant should note that this statement is considered a product-by-process limitation. In product-by-process claims, "once a product appearing to be substantially identical is found and a 35 U.S.C. 102/103 rejection [is] made, the burden shifts to the applicant to show an unobvious difference." MPEP 2113. This rejection under 35 U.S.C. 102/103 is proper because the "patentability of a product does not depend on its method of production." In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985).

Regarding Claim 8, Mendler et al. '394 disclose the heat exchanger as claimed in claim 1 wherein the base plate has at least one supply opening (*see annotated Fig. 1: wherein the $6s$ is one supply opening*) for the heat exchanger medium or the second medium.

Regarding Claim 10, Mendler et al. '394 disclose the heat exchanger as claimed in claim 1, wherein the heat exchanger is an oil cooler (Col 2, lines 26-27).

Regarding Claim 13, Mendler et al. '394 disclose the heat exchanger as claimed in claim 1, wherein the contour of the depression has a shape (*see annotated Fig. 2: wherein the contour shape 17c is the depression shape*) that matches a shape of an outer edge (18, Fig. 2: Col 3, lines 23-25) of a bottom surface (*Fig. 2: wherein an under surface of 2' is a bottom surface*) of the one heat exchanger plate.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a)

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

Considering objective evidence present in the application indicating obviousness or nonobviousness

Claims 9 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mendler et al.* '394, in view of *Kull et al. (U.S. Patent No. 5,931,219)*, hereinafter referred to as *Kull et al.* '219.

Regarding Claim 9, *Mendler et al.* '394 disclose the heat exchanger as claimed in claim 1, except the limitation of wherein the heat exchanger is a charge-air/coolant cooler.

Kull et al. '219 teach: a heat exchanger (30, Fig. 3: Col 4, line 8) is a charge-air/coolant cooler (Col 5, lines 15-16) for an internal combustion engine. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the *Mendler et al.* '394 heat exchanger to include the use of a charge-air/coolant cooler as taught by *Kull et al.* '219 in order to provide a high heat transmission capacity (*Kull et al.* '219 - Col 6, lines 22-23).

Regarding Claim 11, *Mendler et al.* '394 disclose the heat exchanger as claimed in claim 1, except the limitation of wherein the heat exchanger is an exhaust gas cooler.

Kull et al. '219 teach: that the heat exchanger (30, Fig. 3: Col 4, line 8) is an exhaust gas cooler (Col 5, lines 16-17) for an exhaust-gas recycling system. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the *Mendler et al.* '394 heat exchanger to include the use of an exhaust gas cooler as taught by *Kull et al.* '219 in order to provide cooling of exhaust-gas in an exhaust-gas recycling system (*Kull et al.* '219 - Col 5, lines 18-19).

Regarding Claim 12, *Mendler et al.* '394 disclose the heat exchanger as claimed in claim 1, except the limitation of wherein the heat exchanger is an evaporator.

Kull et al. '219 teach: a heat exchanger (30, Fig. 3: Col 4, line 8) is an evaporator (Col 2, line 51, wherein heat exchanger is an evaporator) for an internal combustion engine. Therefore,

Art Unit: 3784

it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Mender et al. '394 heat exchanger to include the use of an evaporator as taught by Kull et al. '219 in order to provide cooling for an exhaust-gas of an internal combustion engine (*Kull et al. '219 - Col 2, lines 29-32*).

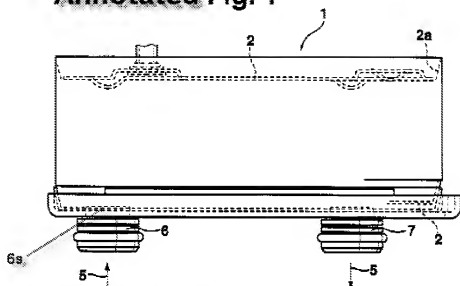
U.S. Patent

Jul. 27, 1999

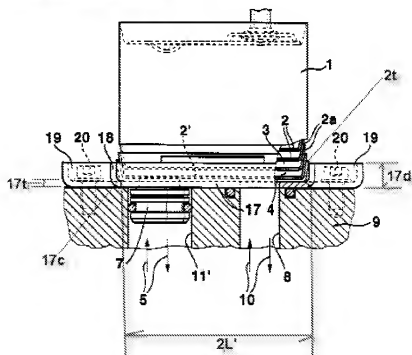
Sheet 1 of 2

5,927,394

Annotated Fig. 1



Annotated Fig. 2



U.S. Patent

Jul. 27, 1999

Sheet 2 of 2

5,927,394

Fig. 3

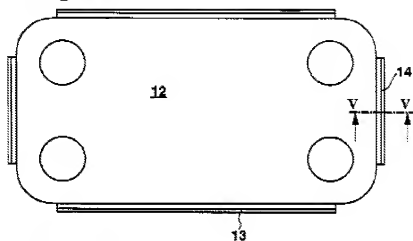
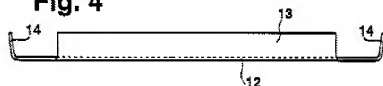
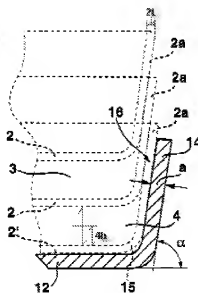


Fig. 4



Annotated Fig. 5



Response to Arguments

5. Applicant's arguments, see pages 6-10, filed 09/14/2010, with respect to the rejection(s) of claim(s) 1-7 and 13 under 35 USC § 102(b) and claim(s) 8-12 under 35 USC § 103(a) have been fully considered but are moot in view of the new ground(s) of rejection as state above. Furthermore, it is noted that in Applicant submitted amendment of 09/14/2010 the agreed upon language as noted in the interview summary mailed on 08/10/2010 was not included,

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EMMANUEL DUKE whose telephone number is (571)270-5290. The examiner can normally be reached on Monday - Friday; 8:00am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler or Frantz Jules can be reached on 571-272-4834 or 571-272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cheryl J. Tyler/
Supervisory Patent Examiner, Art Unit 3744

/EMMANUEL DUKE/
Examiner, Art Unit 3784
10/25/2010